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The author's stated purpose is to answer the questions: (1) Do auxiliary verbs exist in Spanish? If so, what are the characteristics which distinguish them as a class, and what specific verbs are included in that class? (2) Is there, in particular, a class of modal auxiliaries? If so, what are their defining characteristics, and what is the membership of such a class? (3) If modals are found not to exist as such in deep structure, what analysis can be put forth to account for the special characteristics of those verbs which have traditionally been so classed? A brief review of traditional and current linguistic analyses is given and the author's analysis is presented in the form of a transformational generative grammar model. It is the author's view that there is "strong evidence" to suggest that modals are main verbs in deep structures. The traditional auxiliaries ("haber + do" and "estar + ndo"), however, are treated as auxiliaries rather than main verbs. Appended to this analysis are: Rules of the Base Component, Lexicon, Transformational Rules, and Exemplary Derivations. (JD)

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MODAL AUXILIARIES IN SPANISH

by Philip W. Klein

UNIVERSITY OF WASHINGTON
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by

PHILIP W. KLEIN

STUDIES IN LINGUISTICS
AND
LANGUAGE LEARNING

VOLUME IV

SEATTLE 1968

This volume is an unrevised thesis, submitted by Philip Klein for the M.A. degree in linguistics at the University of Washington. It is an attempt to apply some of the more recent notions of transformational grammar to Spanish.

This is the fourth volume in a series which will include Master's and Ph.D. theses completed at the University of Washington in problems of linguistics and language learning. We feel that these studies warrant the wider distribution made possible through publication in this form.

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Statement of Purpose

It is the purpose of this thesis to shed some new light on certain problems concerning "modal auxiliaries" in the Spanish language. The following questions will underlie the research:

(1) Do auxiliary verbs exist in Spanish? If so, what are the characteristics which distinguish them as a class, and what specific verbs are included in that class?

(2) Is there, in particular, a class of modal auxiliaries? If so, what are their defining characteristics, and what is the membership of such a class?

(3) If modals are found not to exist as such in deep structure, what analysis can be put forth to account for the special characteristics of those verbs which have traditionally been so classed?

Modal Auxiliaries in Spanish

I. Background: the nature of the problem

Most authorities and researchers in the field of Spanish grammar refer to certain verbs as auxiliaries, and some speak further of a class of modal auxiliaries. They disagree, however, as to just which verbs are to be designated by these terms and generally define membership in these part-of-speech classes in only the vaguest terms, if at all. One gets an idea of the disparity and imprecision of prevailing analyses in this area from a brief survey of some representative comments from the literature. For example, the grammar of the Real Academia Española (R.A.E.; 1928:52) states:

> "Se llaman auxiliares porque sirven de auxilio para la formación de los tiempos compuestos...
>
> "Los verbos propiamente auxiliares son haber y ser, aunque otros (véanse los números 90, 91 y 92) hagan el oficio de tales en algunos casos."

In sections 90, 91 and 92, tener (que), haber de, deber (de), dejar, estar, llevar, and quedar are mentioned as auxiliaries.

As typical of the constructions in which auxiliaries occur, the Academy cites as examples:

tengo que salir	he amado
he de caminar	[lo] tengo pensado
debió de recibir[la]	está mandado
debe estar agradecido	[lo] dejaron dicho
	quedó resuelto
	[lo] lleva entendido

It will be noticed that the constructions in the left column above are all of the form "auxiliary plus infinitive," and that those in the right column are all of the type "auxiliary plus past participle," but the Academia does not state what significance this formal distinction may have. Furthermore, a preposition is apparently allowed in at least the former construction, under certain unexplained conditions. The failure to note these differences in the data cannot but detract from the formal usefulness of the notions of "tiempo compuesto" and "verbo auxiliar." Thus, the R.A.E.'s "definition" of verbal auxiliaries amounts to hardly more than a list of examples[1].

The Royal Spanish Academy then goes on to say:

(a) "Hay verbos, como poder, deber, osar, soler, que forman con el indicativo una especie de conjugación perifrástica, en la que es siempre idéntico el sujeto de los dos; y así se dice: puedo salir; debo ir...

"Lo mismo ocurre con pensar, esperar, lograr, y otros, pero con la diferencia de que en és-

(b) tos puede reemplazar al infinitivo una oración enunciativa; y así decimos: pienso salir, o pienso que saldré...

"Los verbos querer, desear, saber, admiten, como pensar, las dos construcciones, pero se dife
(c) rencian en que con el subjuntivo es distinto el sujeto de los dos verbos; v. gr.: quiero salir, pero quiero que tú salgas..." (449)

Several matters are left unclear in these paragraphs:

(i) Although the R.A.E. does not call the verbs of (a,b,c) auxiliaries, they are certainly identical to the auxiliaries of the left column above in at least the formal characteristic of occurring before an infinitive (those of (a) occur so exclusively).

(ii) In (b), the R.A.E. ignores a change of meaning which results when a clause replaces an infinitive, as in pienso salir 'I plan to leave' → pienso que saldré 'I think I'll leave'[2].

(iii) Also in (b), lograr doesn't belong with pensar, since one may not say *logro que saldré *'I accomplish that I'll leave'.

(iv) (c) should include esperar (from (b)): espero que tú salgas 'I hope you'll leave'.

(v) Also in (c), saber behaves differently than querer: sé manejar 'I know how to drive', *sé que él maneje *'I know that he drive'.

(vi) While (c) purports to list all members of the subclass, neither (a) nor (b) makes any such attempt, leaving open the question of what other verbs should be classed with them (if any).

Furthermore, since the denomination conjugación perifrástica refers to the fact that Spanish expresses analytically, that is, by paraphrase, certain grammatical distinctions (viz: those of mood) which in some other languages are expressed by inflection of the verb (conjugation), it might be asserted that the Real Academia implicitly recognizes, albeit in a very roundabout way, a "modal" character in some Spanish verbs.

Another approach to the question of auxiliaries is offerred by Ramsey (1958), who devotes a chapter to "The Auxiliary Verbs Deber and Poder," in which he states:

> "26.3 Placed as an auxiliary verb before an infinitive, deber has the two following values: (1) it expresses ideas...represented in English by the defective verbals ought, should, must...; (2) it expresses an inference from circumstantial evidence, represented in English by one acceptation of must...(475)
>
> "26.23. Poder is a true auxiliary, as it always applies...to a following infinitive...It has the following values: (1) it corresponds to Eng. be able..., generally represented...by the defective verbal can...; (2)...it is used like Eng. may to

express permissibility..."(487)

Unlike the R.A.E., Ramsey sepcifically designates poder and deber as auxiliary verbs. While this list of two presumably exhausts the class[3], and Ramsey seems to imply occurrence before an infinitive as the defining characteristic for such auxiliaries[4], it is interesting to note the extent to which he relies on meaning, specifically, on "translation," to make his point, and that the English glosses of his examples are invariably what we call "modals" (ought, should, must, can, may).

Furthermore, in a section (21.65) entitled "Periphrastic Verbal Expressions" (reminiscent of the second quote above from the Real Academia), Ramsey groups together ir a, acabar de, haber de, tener que and tener de, all occurring before infinitives, explaining that:

> "By a periphrastic verbal expression is meant, primarily, a combination of two or more words to express a single verbal action; the term is here applied to a number of phrases which govern the infinitive, modifying its meaning in various ways, and are sometimes nearly equivalent to additional tense forms..." (398)

Although one might suspect some sort of relationship between auxiliary verbs plus infinitives and these "periphrastic verbal expressions," Ramsey does not clarify the matter further. Indeed, the qualifying words

"primarily," "various," and "sometimes nearly" unfortunately render the cited paragraph rather uninteresting, if not altogether meaningless, because of their imprecision.

These "traditional" views of the problem of the specification of a class of auxiliaries in Spanish, then, each lead to a different conclusion. The Real Academia Española lists haber, ser, tener (que), haber de, deber (de), dejar, estar, llevar, and quedar as auxiliary verbs, whereas Ramsey puts poder, deber (and haber) in this class. Both speak of verbal perífrasis, though the former lists poder, deber, osar, soler, pensar, esperar, lograr, querer, desear, and saber as participating in such a construction, while the latter has ir a, acabar de, haber de, tener que, and tener de. In hopes of clarifying the matter, we now turn to some modern approaches to Spanish auxiliaries.

Stockwell, Bowen and Martin (1965), while acknowledging the usefulness of Aux for categorizing the verb with respect to tense and aspect, and admitting estar and haber as auxiliary verbs[5], nevertheless caution us that

> "It is not infrequent to find poder, querer, and deber labeled in Spanish texts as modal auxiliaries, or pseudo-modals, or the like. But they share almost none of the modal characteristics of English: they have full paradigms for person, number, tense, and aspect; they accept

> objects like other transitive verbs; they allow the secondary modification of other verbs; in short, they are simply verbs which happen to carry lexical meanings which overlap with the meanings of English modals." (165)

Thus, these authors specifically deny the existence of a class of modal auxiliaries in Spanish, maintaining that poder, querer and deber belong together in a class of verbs: namely, the class of transitives, a claim which, again, conflicts with those of previously cited analyses.

Stockwell, Bowen, and Martin do, however, offer specific structural evidence for their conclusions, an invaluable prerequisite to the evaluation of their claims. Unfortunately, such an evaluation will show that their analysis is based on facts of "surface structure," rather than on considerations of "underlying structure." But in order to understand these terms and, in general, to consider the question of what kind of evidence is useful in linguistic analysis, we turn now to a short discussion of the nature of the theoretical framework in terms of which such evidence takes on meaning.

footnotes to section I:

1) By way of comparison, note that Gili y Gaya (1960:97) proposes a semantic "definition" of auxiliary verbs: "Para distinguir si un verbo está empleado como auxiliar basta fijarse en si ha perdido su significado propio. Cuando decimos voy a contestar a su carta, el verbo ir es auxiliar, puesto que no conserva su aceptación de movimiento de un lugar a otro..." After giving other examples, he states "Como todos estos verbos (con excepción de haber) conservan en la lengua moderna su aceptación propia, el sentido habrá de decidir, en cada oración en que aparezcan tales perífrasis, si su significación se ha perdido o se ha oscurecido en grado suficiente para estimarlos como verbos auxiliares." But his basing of the definition of a syntactic category on criteria of meaning opens the author to the many criticisms of semantically-oriented part-of-speech definitions which have often and persuasively been made (e.g., Bloomfield (1933:266-8)). Note that Roca Pons (1958) follows Gili y Gaya's essential dependence on semantic information, and, further, introduces diachronic considerations, the proper role of which in a syncronic study is none too certain: "El proceso seguido por un verbo hasta llegar a ser un verdadero auxiliar es un caso de gramaticalización. Sin embargo, no siempre se llega a una pérdida completa de sentido concreto..."(12) "Por último suelen considerarse auxiliares verbos que no experimentan una verdadera pérdida de significación concreta, como en los casos anteriores, pero que unidos a ciertas formas nominales expresan modalidades diversas de la acción o estado.... Los límites, por lo tanto, son a veces inseguros." (14)

footnotes to section I (concluded):

(2) The change in meaning of the verb pensar in these two constructions can also be illustrated by Spanish paraphrase: 'tengo la intención de salir', and 'creo que saldré', respectively, showing that the semantic change is not just a matter of English glossing.

(3) Except that haber is listed as an auxiliary verb used in the formation of the "perfect tense" (treated in 18.6,7).

(4) It is in this position that deber, whose "primary meaning, which it still has before a noun, is to owe" (26.1), takes on its modal quality.

(5) More precisely, they admit (haber+do) and (estar+ndo) as the "modification for relevant anteriority" and the "modification for explicit duration," respectively, as "Auxiliary Components of the Verb Phrase." (143)

II. A case for modals in Spanish

A. Theoretical considerations

The main problem in the traditional analyses cited in the previous section is their lack of explicitness. The meaning of such terms as "compound tense" and "conjugación perifrástica" is by no means any more self-evident than the nature of the data which they attempt to explain. Necessary to any study of language is a formal theory of linguistic structure through which to interpret and elucidate the facts of language.

The most explicit and promising theory presently available is transformational grammar. It may be convenient to review here a few relevant notions of the transformational model which relate immediately to the problems at hand; in particular, its attitude towards part-of-speech definition and towards class-membership.

In a transformational grammar, a "noun," for example, is any morpheme (or "formative") which is traceable back to (i.e., "dominated by") a node N(oun) in the P-marker underlying the sentence in which it appears. Thus, the CLASS-MEMBERSHIP of a given lexical category (N) in a particular language is given internally and automatically by the grammar of that language[1].

On the other hand, the major lexical categories, which are presumably common to all languages, find a DEFINITION which is cross-linguistic: the general theory of linguistic descriptions imposes certain formal, universal constraints on the notion "noun" in any and all languages[2]. Note also that whether a given lexical category made available by the metatheory (e.g., M(odal)?) is actually necessary to the description of a given language is an empirical question: inclusion of a given category is justified to the extent that the grammar which incorporates it is simpler and more general (i.e., achieves greater "explanatory adequacy") than an alternative, competing grammar which does not incorporate the part of speech in question.

Recall too, à-propos now of the quote from Stockwell, Bowen and Martin, that basic to the transformational model of grammar is the distinction between surface (or derived) structure and deep (or underlying) structure, the latter being mapped onto the former by the transformations. Chomsky has shown that not all of the relevant information about a construction is available on superficial inspection, and that in order to account for relationships which hold between sentences (generally, to show underlying regularities in seemingly heterogeneous data, or underlying differences in seemingly homogeneous data), it is necessary to recur to the level of deep

structure[3].

II.B. A transformational analysis

For example, in the light of Stockwell, Bowen and Martin's decision to group poder, querer and deber together in the class of transitive verbs, consider the following sentences in which they participate:

(1) a. quiero comprar (las flores)
'I want to buy (the flowers)'

b. puedo comprar (las flores)
'I can buy (the flowers)'

c. debo comprar (las flores)
'I must buy (the flowers)'

The surface structures exhibited are identical: finite verb plus infinitive (plus direct object). But the deep structures involved are seen to be different, in that, whereas those underlying (1b,c) may be passivized to yield (2b,c), (2a) is not the passive of (1a):

(2) a. *las flores quieren ser compradas por mí[4]
*'the flowers want to be bought by me'

b. las flores pueden ser compradas por mí
'the flowers can be bought by me'

c. las flores deben ser compradas por mí
'the flowers must be bought by me'.

Since a given transformation must apply to any underlying string which matches its structural description, it follows that (1b,c) do meet the required description of the passive transformation, that (1a) does not, and therefore, that (1a) has a different deep structure than (1b,c).

A clue as to the nature of the underlying structures involved can be gained by noting that, whereas (3a) is grammatical, (3b,c) are not;

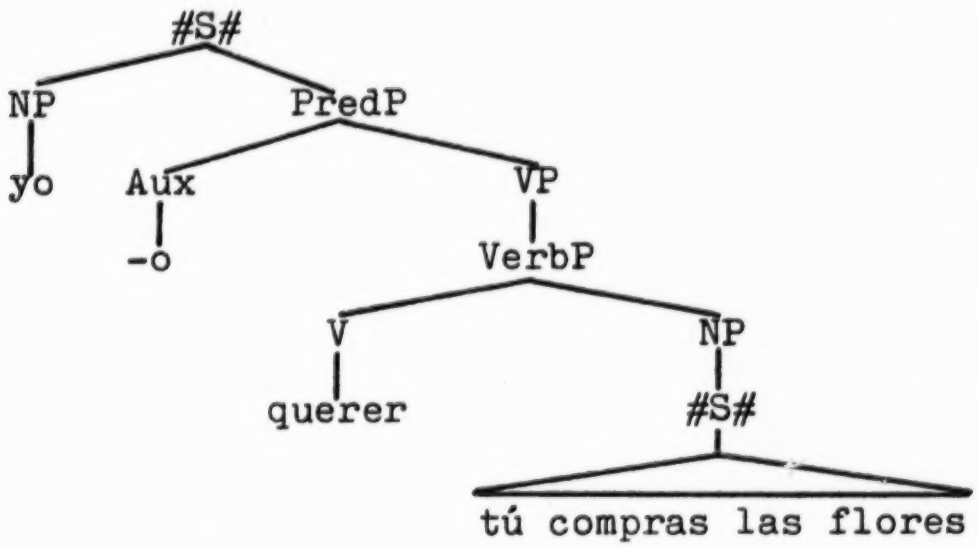
(3) a. quiero que tú compres las flores
'I want you to buy the flowers'
b. *puedo que tú compres las flores
'*I can you to buy the flowers'
c. *debo que tú compres las flores
*'I must you to buy the flowers'.

(3) differs from (1) in that in the former there is a change of subject in the second clause. But this clause is a second, embedded sentence in (3a)'s deep structure, as is shown by the fact that it itself may appear in passive form, as in (3d):

(3) d. quiero que las flores sean compradas por ti
'I want the flowers to be bought by you'.

That is, (3a,d) result from a sentence "<u>tú compras las flores</u>" 'you buy the flowers' being embedded into a matrix sentence "<u>quiero</u> $[\#S\#]_{NP}$" 'I want $[\#S\#]_{NP}$'[5]. Thus, the P-marker underlying (3a) is

(4)



Notice now that all of (5) also have (4) as their deep structure:

(5) quiero que él compre las flores
'I want him to buy the flowers'
quiero que nosotros compremos las flores
'I want us to buy the flowers'
quiero que ellos compren las flores
'I want them to buy the flowers',

as different choices are made for subject in the embedded #S# of (4), with the anomaly that (6) is ungrammatical:

(6) *quiero que yo compre las flores
*'I want me to buy the flowers'

However, even though (6) never occurs in surface structures, there is good reason to allow it to be generated by the base as the deep structure underlying (1a), into which it is (obligatorily) mapped by a transformation which operates just in case the subjects of the matrix #S# and of the embedded #S# are identical. By allowing (6) as the underlying representation of (1a), we not only eliminate the anomaly of its "non-occurrence," but also account for the close relationship which we intuitively feel to exist between (1a), (3a) and (5), as evidenced by the parallelism of their semantic interpretations.

This evidence seems to demonstrate quite conclusively that the deep structure of (1a) is (4). But what, then, is the deep structure of (1b,c)? Their behavior with respect to passivization and change of subject indicates that the underlying P-marker of sentences with (superficially) querer plus verb differs from those of sentences with poder or deber[6].

An answer to this question is proposed by Bolinger (1967:206) in his review of Stockwell, Bowen and Martin:

> "5. Granted that it is pedagogically sound to ignore the class of modal auxiliaries in Spanish and to lump them in with other transitives on the strength of their behavior with infinitives

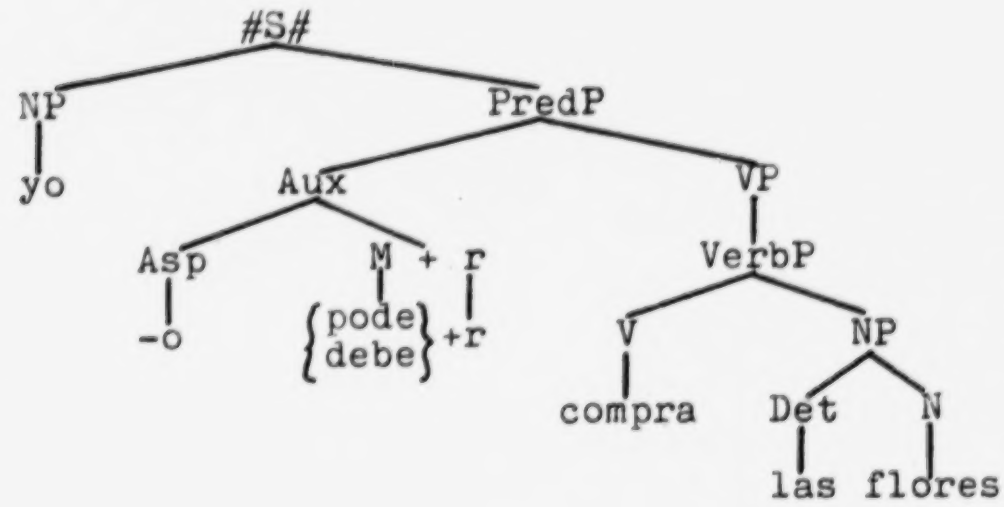
> (Puede hablar = Odia hablar), it will hardly do to abolish them (165). A good test frame is the following: Lo que quiere es hablar, *Lo que puede es hablar. The full-grade transitives fit, but - just as in English - the modals require an added infinitive: What I can DO is speak. Sp. deber thus splits into two homonyms, one fitting E. owe, the other ought: *Lo que debo es trabajar has to become Lo que debo hacer es trabajar. By this criterion the class of modals in Spanish turns out to be sizable, e.g., En lo que insistimos es en continuar, vs. *De lo que hemos es de continuar, proving that haber de belongs.

Note that Bolinger brings to bear on the problem the same kind of evidence we have been considering: namely, that of inter-sentential relations. His "test frame" amounts to the application of a transformation (which Rosenbaum (1967:104) calls the "pseudo-cleft" transformation) to the deep structure underlying a particular construction, in order to yeild another, derived structure. Thus, his analysis is more closely in accord with the theory of transformational grammar than any other considered so far.

Bolinger wishes, then, to distinguish poder and deber from querer by treating the former as modal auxiliaries. This could be effected by including in the base component of the grammar a rule such as (7) to generate (1b,c) with the P-marker (8):

(7) Aux → Asp ⟨M+r⟩ ⟨abe+do⟩ ⟨sta+ndo⟩

(8)



The addition to the grammar, then, of a category M(odal) is a way of accounting for the different behavior of poder and deber as compared to querer in (3), since (8) includes no embedded #S# to permit "change of subject," and in (2), since the passive transformation would evidently allow for ⟨M+r⟩ before the V of V+NP, just as it must allow for ⟨abe+do⟩ and ⟨sta+ndo⟩ in that position:

(9) he comprado las flores →
'I've bought the flowers'
las flores han sido compradas por mí
'the flowers have been bought by me'
estoy comprando las flores →
'I'm buying the flowers'
las flores están siendo compradas por mí
'the flowers are being bought by me'
puedo comprar las flores →

'I can buy the flowers'

las flores pueden ser compradas por mí

'the flowers can be bought by me'.

Any metatheoretic definition of such a class of modals would be quite beyond the scope of this thesis, however, since far too little is known about the nature of modals in the other languages of the world to permit formalization of the required cross-linguistic definition in terms of language universals. The formal specification of the class-membership of the Modal category in Spanish, on the other hand, would be straightforward; viz: the modal auxiliaries are all and only those lexical formatives which may be dominated in the P-marker underlying the sentences in which they occur by a node M; i.e., those specified in their lexical entry with the syntactic feature [+M][7]. Thus, at least poder and deber (but not querer) would be so marked:

(10) poder [+M]

deber [+M]

querer [+V, +[__[#S#]$_{NP}$,...]

Before attempting to find other modals (Bolinger suggests that the class "turns out to be sizable"), or to investigate the ramifications of his including a preposition in some modal auxiliaries (haber de), we must notice certain basic problems in the case for modals which

has so far been built up. The following critical evaluation of the role of modals in a transformational grammar of Spanish may have implications for the wider question of auxiliary verbs in general.

footnotes to section II:

1) Bach (1964:28-9)

2) The exact nature of these constraints is not yet well understood, but see Chomsky (1965:116).

3) Chomsky (1957:38-44; 1964:82-5)

4) (1a) is ungrammatical as a result of its violating the selectional restriction which prohibits querer from taking non-animate subjects. To clarify the fact that it is not the passive of (1a), consider the following parallel example which shows an animate subject: (i) quiero convencerle a Juan 'I want to convince John', (ii) Juan quiere ser convencido por mí 'John wants to be convinced by me', in which (ii) is clearly not the passive of (i), since it has a distinct semantic interpretation, and transformations are not permitted to alter, add, or delete meaning (see Katz and Postal (1964:32)). The deep structure of (ii) is, rather, [Juan quiere[[yo convenzo a Juan por+Pass]$_S$]$_{NP}$]$_S$, in which the embedded sentence has undergone passivization.

5) That the #S# is doninated by a NP is suggested by the fact that (3a) undergoes the pseudo-cleft transformation: lo que quiero es que tú compres las flores 'what I want is for you to buy the flowers', which, according to Rosenbaum (1967), applies only to strings of the form V+NP (i.e., not V+#S#).

6) But see section III for counter-evidence.

footnotes to section II (concluded):

7) In fact, [+M] would be the only syntactic feature necessary for modals; it would be vaccuous to specify them further for (e.g.) -[__NP] or -[__#S#], ostensibly to prevent *puedo el café *'I can the coffee' and *debo que tú vengas *'I must you to come', respectively, since there would be no rules in the base component which strictly-subcategorized modals for these or any other contextual features. (For a discussion of syntactic features and the nature of subcategorization, see Chomsky (1965:93-5)).

III. An alternative proposal

A. Inadequacies of the [+M] analysis

There are at least three fundamental deficiencies in the case for modals presented in section II.B. One has to do with the allowability of more than one modal in the Aux phrase, another involves certain changes in the meaning of the modal, depending on its position within the Aux, and the third has to do with negation. We will consider each problem in turn.

As for the matter of multiplicity of occurrence of modals, it will be recalled that (7) allowed only one modal in the Aux phrase, to occur as the first element after Asp, if at all. This accounts nicely for sentences like

(11) a. puedo cantar
'I can/may sing'

b. puedo haber cantado
'I can/may have sung'

c. puedo estar cantando
'I can/may be singing',

and many others, but ignores the existence in Spanish of

such well-formed sentences as

(12) a. debo poder cantar

'I must be able to sing'

b. puedo deber cantar

'I may have to sing'

c. he debido poder cantar

'I've had to be able to sing'

d. debo haber podido cantar

'I must have been able to sing'

e. puedo haber debido cantar

'I may have had to sing'

f. debo haber podido estar cantando

'I must have been able to be singing'

g. puedo haber debido estar cantando

'I may have had to be singing'

h. he de haber debido poder cantar

'I must have had to be able to sing',

all of which contain two modals (underlined), while (12h) has three.

Presumably, (7) could be modified to account for these data; it might be reformulated as

(13) Aux → Asp ⟨M+r⟩⟨abe+do⟩⟨M+r⟩⟨M+r⟩⟨sta+ndo⟩.

Now, while (13) may state the facts, it is none too elegant, and its ad hoc appearance indicates that it

may be missing a generality. However, it will be shown below that (13) does not, in fact, meet even observational adequacy. (Note in passing that even though (13) may be deficient for describing the modals, it is entirely correct for <abe+do> and <sta+ndo>, which may never be repeated in the same Aux phrase, and occur always in the order indicated.)

Now consider the problem of changes in the meaning of a given modal. This is already apparent in (12), where poder refers in (a) to ability, and in (b) to possibility. That is, (12a,b) may be paraphrased as

(14) a. debo ser capaz de cantar
'I must be able to sing'

b. es posible que deba cantar
'it's possible that I must sing'

respectively. In order to account for these facts, we might be led to postulate two different modals poder: $poder_1$ "ser posible que" 'be possible that', and $poder_2$ "ser capaz de" 'be able to'. But even with this modification of the analysis, (13) would fail to predict the ungrammaticality of

(15) a. *debo $poder_1$ cantar
= *"debo ser posible de cantar"

*'I must be possible of singing'

b. *puedo$_2$ deber cantar

=*"soy capaz de deber cantar"

*'I'm able to have to sing'

c. *puedo$_2$ poder$_1$ cantar

= *"soy capaz de ser posible de cantar"

*'I'm able to be possible of singing'.

Since modals are not subject to contextual strict-subcategorization (being marked syntactically simply as [+M]), the generalization that poder has one meaning ("possibility") when it occurs initially among the optional elements of the Aux phrase (11, 12b,e,g), and another meaning ("ability") when it occurs either non-initially (12a, c,d,f,h), or initially except before another modal (11), cannot be expressed. Since (13) allows poder$_1$ and poder$_2$ to be substituted indiscriminately for M, it is seen to be inadequate even on the observational level. (Note again that the auxiliaries <abe+do> and <sta+ndɔ> do not undergo any change of meaning relative to their positions; the problem is strictly with the modals.)

Of course, the grammar could be complicated in order to save (13), by the addition of a rule which would subcategorize modals in terms of the contexts in which (11, 12) show them occurring. In such a grammar, poder$_1$ ("possibility") and poder$_2$ ("ability") would be specified

as follows:

(16) poder_1 [+M, +[Asp__{[+M], (abe+do), (sta+ndo)}]]

poder_2 [+M, +[Asp__[-M]], +[[+M]__], +[(abe+do)__], +[__(abe+do)], +[__(sta+ndo)]].

There is a parallel problem of dependence of semantic interpretation on the environment in the case of deber, which can mean either "ser probable que" 'be probable that', or "tener la obligación de" 'have the obligation to', which we can dub deber_1 and deber_2, respectively, as the reader can easily verify by an examination of its meanings in (12) and (17):

(17) a. debo haber cantado
= "es probable que haya cantado"
'it's probable that I've sung'
= "tengo la obligación de haber cantado"
'I have the obligation of having sung'

b. debo estar cantando
= "es probable que esté cantando"
'it's probable that I'm singing'
= "tengo la obligación de estar cantando"
'I have the obligation to be singing'.

(We postpone until section III.B. consideration of the

fact that debo cantar seems to unambiguously mean "tengo la obligación de cantar" 'I have the obligation of singing', not "es probable que cante" 'it's probable that I sing'.)

Thus, $deber_1$ would be marked exactly as $poder_1$, and $deber_2$ like $poder_2$, under this proposal for accounting for their varying meanings. In other words, the [+M] analysis, which was added to the grammar to account for (1,2,3), can avoid the problems of (14) by the addition of yet another rule to the grammar, one which imposes a contextual subcategorization on [+M].

Turning now to the third area of difficulty, the problems which arise in negation of sentences containing modals, notice that (11a) may be negated in two ways:

(18) a. no puedo cantar 'I can't sing'
b. puedo no cantar 'I may not sing'

Aside from the semantic problems involved here (similar to those discussed above), there is also a basic syntactic anomaly. Recall that, according to the [+M] theory, puedo cantar is one sentence. Notice, too, that the grammar provides only one <Neg> per sentence. I.e., even though sentences with "double negatives," like no veo a nadie 'I don't see anybody', exist in Spanish, they are generated with only one Neg, which the transformations may attach to various formatives so long as meaning is unaltered.

But since there is a clear difference in semantic interpretation between (a) and (b) of (18), these transformations cannot be held responsible. Indeed, the grammar will generate only one of (18), but not the other. Since a grammar which fails to generate all well-formed sentences of the language lacks even "weak generative capacity," the problem of negation is more serious than those involving multiple occurrence and change of meaning, which had to do only with "strong generative capacity"[1].

Conceivably, the rules of the base could be modified again, this time to allow introduction of <Neg> twice within the same sentence. But in view of the lack of any clear, independent motivation for such a fundamental change, the modal theory, at least as presented here, must be regarded with great suspicion. (Notice, finally, that there is no parallel problem with multiple negation of the auxiliaries <abe+do> and <sta+ndo>; that is, there are no sentences *he no cantado *'I sung haven't' and *estoy no cantando *'I'm singing not'; neither are these predicted by the grammar.)

III.B. Modals as main verbs

In view of the inability of Bolinger's idea of a grammar which postulates a category [+M], subsuming

poder, deber, haber de, and perhaps others, to account very satisfactorily for the matters of multiple occurrence of these lexical items, for changes in their meaning in different constructions, and for some instances of negation, we are led to look elsewhere for an adequate analysis of "modals." Perhaps the claim made by Stockwell, Bowen and Martin but rejected above because of the superficiality (in a technical sense) of the supporting evidence presented, that so-called modals are "simply verbs," is worthy of reconsideration, this time in terms of evidence from deep structure. The remainder of this study will be devoted to exploring the possibilities of such an approach.

Strong evidence suggesting that modals are main verbs in deep structures, and at the same time explaining the facts of the multiple occurrence, associated changes in meaning, and two-way negative formation, is found by examining the ambiguity inherent in such a sentence as

(19) puedo invitar a Juan
'I can/may invite John',

which has, in fact, three different semantic interpretations, each associated with one of the paraphrases (20):

(20) a. es posible que yo invite a Juan
'it's possible that I'll invite John'

b. soy capaz de invitar a Juan

'I'm able to invite John'

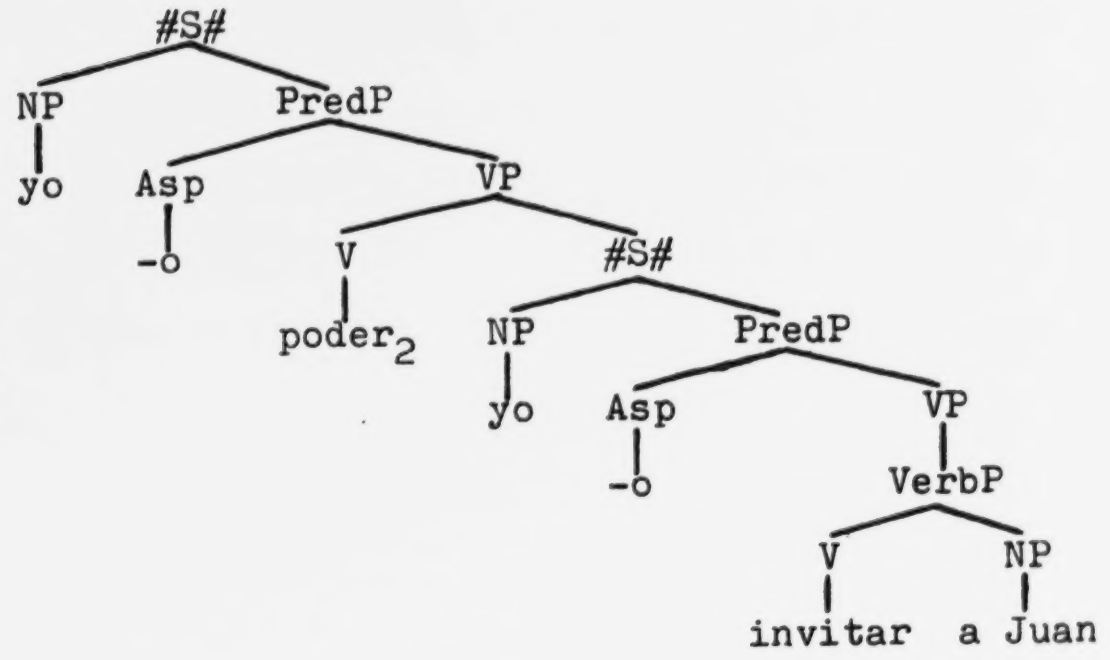
c. se me permite invitar a Juan

'someone permits me to invite John'.

Since the semantic interpretation of a sentence is assumed to be entirely dependent on its underlying P-marker, the fact that (20a,b,c) have three different semantic readings requires that they also have three different underlying structures (whereas the "case for modals" had assigned them all the same deep structure). Furthermore, if modals are main verbs, and the base component assigns no more than one verb to a sentence, then (19), which contains two verbs, must be (at least) two sentences in each of its three underlying representations.

It will be recalled that one such P-marker containing two distinct sentences was postulated as (4), the deep structure of (1a), quiero comprar las flores. Perhaps at least one of (20) has a similar underlying structure. Let us suppose, for example, that (20b) has the P-marker (21), identical to (4); except that the embedded #S# is not dominated by a NP (since (20b) may not take the pseudo-cleft transformation: *lo que puedo es invitar a Juan *'what I can is to invite John'):

(21)



(where the embedded #S# has been fully expanded for clarity of exposition), an instance of verb phrase complementation. If such were the case, we could make the following claims about <u>poder</u> in the sense of "ability":

(22) a. $poder_2$ is a verb, categorially marked [+V];

b. $poder_2$ takes verb phrase complements, and so will be strictly-subcategorized +[__#S#];

c. $poder_2$ takes only animate subjects (*<u>la mesa es capaz de invitar a Juan</u> *'the table is able to invite John'), and is therefore marked for the selectional restriction +[[+Anim]__].

That is, it could be asserted that whenever <u>poder</u> is substituted in a pre-terminal string for a feature complex containing [+V,+[__#S#], +[[+Anim]__],...] it will be interpreted in its sense of "ability," and that it must

have different syntactic features in order to be read as "possibility" or "permission." However, one obvious problem with this approach needs to be cleared up.

It will be recalled that, in section II.B., poder was distinguished (along with deber) from verbs like querer, in that (1a), quiero comprar las flores , consisting of TWO underlying sentences, allowed change of subject in and passivization of the embedded sentence, while (1b,c), puedo/debo comprar las flores, consisting of only ONE sentence, were not succeptible to either of these modifications. And it was also noted that (1b,c) could be passivized, but that (1a) was not capable of a parallel passivization, due to its different underlying structure. If the proposed analysis of modals as main verbs is to be seriously considered as an alternative to the [+M] theory, it must certainly provide a way of accounting for these facts.

The problem of distinguishing poder from querer in deep structures like (4;21), if they may both occur there, is related to the difference between such verbs as tender and insistir, which occur in sentences such as (23), showing the deep structure (24):

(23) a. tendió a criticar a Juan
'he tended to criticize John'
b. *tendió a que yo criticara a Juan[2]

*'he tended that I criticize John'

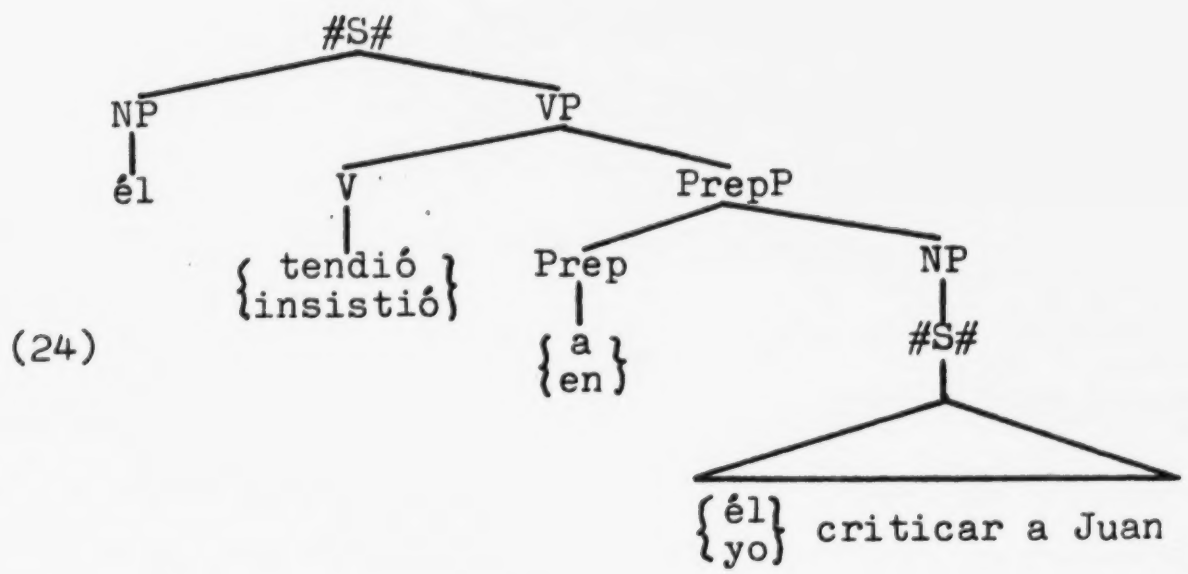
c. insistió en criticar a Juan

'he insisted on criticizing John'

d. insistió en que yo criticara a Juan

'he insisted that I criticize John'

(24)



Now, the fact that tender[3] requires that the subject of the NP-dominated sentence of the complement PrepP be identical to its own subject, while the subject of the #S# following insistir[3] is not so restricted, is formalized as follows: these verbs are differently specified in the lexicon with respect to some syntactic feature $[\pm F_i]$, insistir being marked $[+F_i]$ and tender $[-F_i]$. The transformation which maps (24) onto the derived structure underlying (23b,d) will appeal in its structural description to the value of the feature $[\pm F_i]$, and will apply only if $[+F_i]$ occurs, failing to apply if $[-F_i]$ is present in the P-marker. (The transformation of "equi-NP dele-

tion," which maps (24) onto (23a,c), will not appeal to [$\pm F_i$], and will apply to both tender and insistir.

But the feature [$\pm F_i$], which is necessary to the grammar for reasons having nothing to do with the problem of modals, in fact provides a way of making just the required distinction between poder$_2$ and querer: although they can both appear in similar deep structures, they are distinguished by the former bearing the syntactic feature [$-F_i$], which blocks (3b), *puedo que tú compres las flores, and the latter having [$+F_i$], which allows (3a), quiero que tú compres las flores. That is,the difference between poder$_2$ and querer with respect to change of subject in a following sentence, instead of requiring the setting up of a new grammatical category like [+M] (and further necessitating an ad hoc rule like (13), consequent subcategorization of modals, and modification of negation) can be accounted for by other rules and features independently motivated in the grammar of Spanish.

Note that dual negation, as in (18), is no longer a problem, since (11a) is now analyzed as two sentences, either of which may be negated.

As for the passivization of (1) as (*2a), and (2b,c), the passive with querer is impossible for the reasons given in fn. 4 of section II. But the passive with poder, in the sense of "ability," must also be impossible for exactly the same reasons. That is, the pas-

sive of (20b) is clearly not

(25) Juan es capaz de ser invitado por mí
'John is able to be invited by me',

since Juan's capabilities are quite different from mine. Rather, the deep structure of (25) must show Juan as subject:

(26) [Juan puede_2[yo invito a Juan por+Pass]$_S$]$_S$,

where the embedded sentence has undergone passivization and equi-NP deletion (in that order). Thus, poder can be distinguished from querer in structures like (21,4) by using resources already available in the grammar, without appeal to modals.

If (21) is postulated as the deep structure of (20b), and indeed of all sentences containing poder_2, what might be the deep structure of sentences containing poder_1 ("possibility"), e.g., (20a)? Such sentences as

(27) a. Juan parece dominar el inglés
'John seems to be fluent in English'
b. Juan puede_1 invitar a Pedro
'John may invite Peter'

and their respective paraphrases

(28) a. parece que Juan domina el inglés

'it seems that John speaks fluent English'

b. puede$_1$ que Juan invite a Pedro

'it's possible that John will invite Peter'

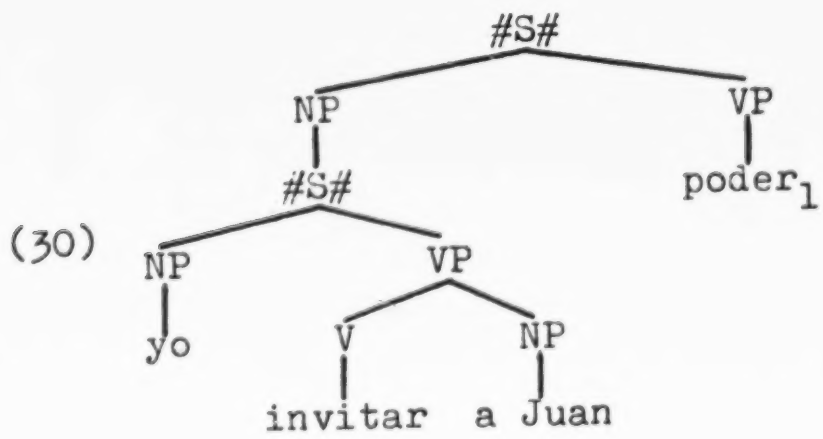
indicate that the deep structure of sentences like (27, 28), which forms the basis for their semantic interpretation, is something like

(29) a. $[[[\text{Juan domina el inglés}]_S]_{NP}[\text{parece}]_{VP}]_S$

b. $[[[\text{Juan invita a Pedro}]_S]_{NP}[\text{puede}]_{VP}]_S$.

That is, the subjects of these sentences seem not to be Juan, but, rather, whole sentences dominated by NP. If this is correct, then the (greatly simplified) P-marker underlying (19) in the sense of (20a) is

(30)

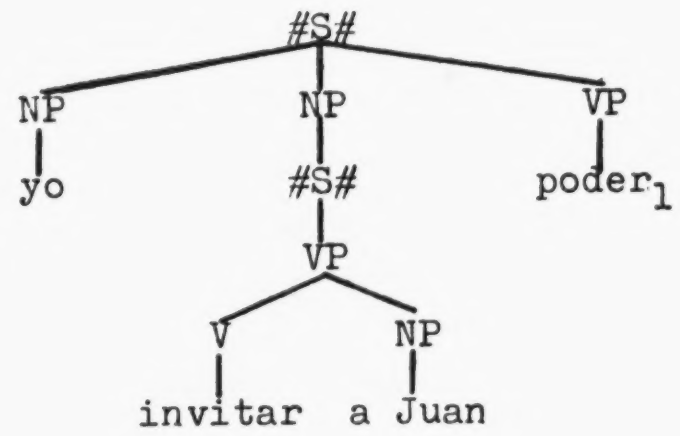


This P-marker asserts that poder$_1$ is specified with the features [+V, +[[#S#]$_{NP}$__], -[__NP],...], i.e., that it is intransitive and takes abstract, sentential subjects; equivalently, that poder, when substituted for

a feature complex consisting of [+V, +[[#S#]$_{NP}$__], -[__NP], +[[+Abst]__],...] is semantically interpreted in its sense of "possibility."

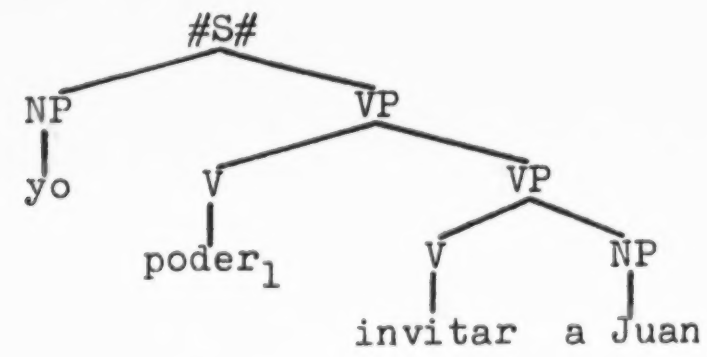
The mapping of (30) onto (20a) is accomplished through, first, a 'subject-incorporation' transformation, which assigns the subject of the embedded #S# to the matrix #S#, producing

(31)



and then a transformation of "VP-promotion," which moves the VP of the embedded #S# under the domination of the matrix VP[5], resulting in

(32)



and, finally, the subject-verb, number-person agreement transformation. Each of these, needed in the derivation of sentences with <u>poder$_1$</u>, is independently motivated in

sentences showing verbs like parecer, empezar a, etc.

Notice that (19) in the sense of (20a) has, unlike (21), a well-formed passive (33):

(33) Juan puede ser invitado por mí
= "es posible que Juan sea invitado por mí"
'John may be invited by me',

which is formed by passivizing the embedded #S# before subject-incorporation, VP-promotion, and agreement occur.

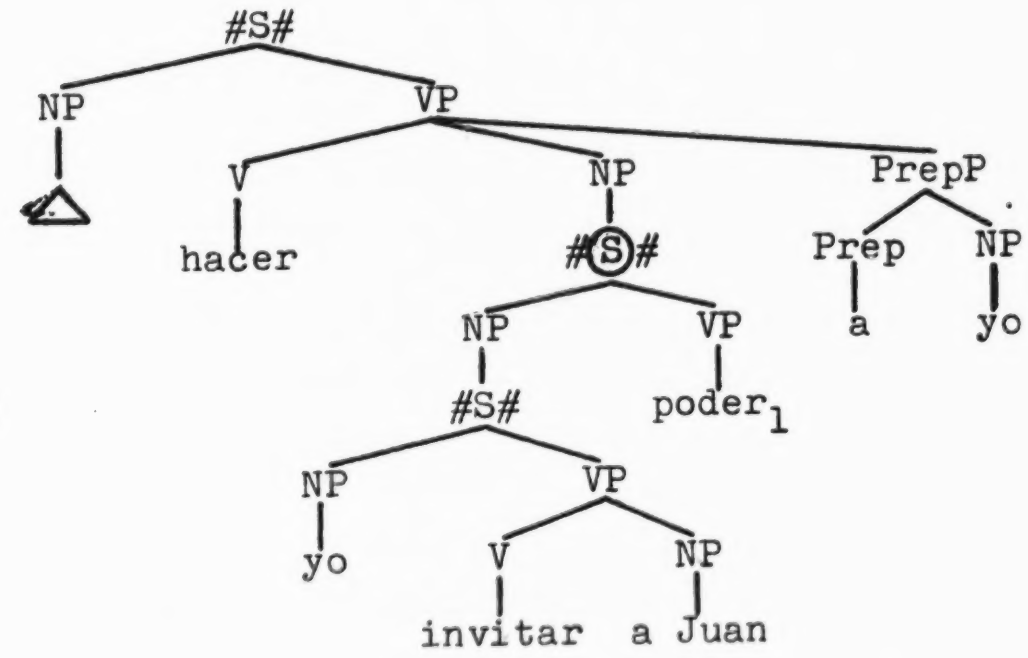
Incidentally, it is interesting to speculate on the nature of the feature-complex for which poder is substituted in deep structures like (21). Given the paraphrase relationship between poder and "es posible que" 'it's possible that', it seems likely that the underlying feature clusters of these are identical, the segment in question appearing superficially as poder if subject-incorporation and VP-promotion have applied, but as puede que 'maybe' or es posible que 'it's possible that' if they have not (through the action of certain conventions which, among other things, specify the unmarked subject as a third-person singular pro-Noun[6]. Likewise, poder and ser capaz de 'be able to' are probably related in a similar way. (For a similar approach to a different problem, see Lakoff (undated).

The underlying structure of (20c), where poder occurs in the sense of "permission," still remains to be investigated. Its paraphrase, se me permite invitar a Juan 'someone permits me to invite John', which may itself be paraphrased as

(34) alguien hace posible que yo invite a Juan

'someone makes (it) possible that I invite John', again gives a clue as to the underlying P-marker, roughly:

(35)



where the embedded tree dominated by Ⓢ is identical to (30), in which poder is interpreted in its sense of "possibility." Thus, (19) in its sense of (20c) is seen to be a "special case" of (20a) in which the P-marker underlying the latter is embedded into a larger structure, one with an over-all "causative" meaning which will have to be generated by the grammar anyway for such sentences as

(36) a. la humedad hace que el hierro se oxide =
'humidity makes iron rust'
b. la humedad hace oxidarse el hierro
'humidity makes iron rust',

which show the labelled bracketting

(37) $[[\text{la humedad}]_{NP}[\text{hace}[\text{el hierro oxidarse}]_{S}]_{VP}]_{S}$.

Thus, poder can be distinguished from querer by means already present in the grammar; namely, by those phrase-structure rules which allow certain verbs (parecer) to take sentential subjects, those which allow others (querer) to take sentential complements, those which generate "causative" sentences, and by that syntactic feature necessary to prevent change of subject in the complement sentence of certain verbs (tender).

Virtually parallel to sentences with poder are those with deber, except that the latter verb is only two-ways ambiguous: as noted on page 26, deber may refer either to probability or to obligation. This fact can be accounted for if we allow deber in the former sense (deber_1) to occur in the same underlying P-markers as poder_1, i.e., (30), and deber in the latter sense (deber_2) to occur in the same underlying structures as poder_2, i.e., (21). Thus, the two deber's will be strictly-subcatego-

rized exactly the same as the two poder's (see p. 31)..

However, as mentioned earlier (p. 26), deber seems to be unambiguously $deber_2$ unless followed by one of the "auxiliaries" haber or estar. Were this the case, the parallelism between poder and deber would be diminished, and a clumsy restriction would need to be placed on $deber_1$, viz: that it could only be inserted before (abe+do) or (sta+ndo).

But further investigation reveals that $deber_1$ is not so restricted. Consider the following sentences, in which deber occurs in its sense of probability:

(38) a. debe llover
'it'll probably rain'

b. Juan debe llegar a eso de las siete
'John will probably arrive at about seven

c. Pedro debe cantar (mañana)
'Peter will probably sing tomorrow'

(38a) must be an instance of $deber_1$, since "weather verbs" never occur with the animate subject necessary for $deber_2$. (38b) is acceptable in the sense of probability, since future time is implicit, and if (38c) is more natural than debo cantar 'I will probably/must sing', it is probably due to the specification of future time and third-person subject (it being presumably more usual to conjecture about others' action than about one's

own.)

Thus, deber$_1$ may indeed occur in the same structures as poder$_1$; although in some instances it sounds a little forced, a situation can be contrived in which the desired interpretation is acceptable (e.g., debo cantar muy mal para que me hayan rechazado en el coro 'I must sing pretty badly for them to not have accepted me into the choir').

If the two verbs which have most frequently been called "modal auxiliaries," poder and deber, are better analyzed as main verbs in deep structures, then the other "modals" are likely to deserve the same treatment. In fact, Bolinger's candidate haber de is clearly like deber in referring either to probability or to obligation:

(39) a. don Carlos ha de tener unos sesenta años
'don Carlos must be about sixty years old'
b. Juan ha de terminar a tiempo
'John will probably/must finish on time'

and so will exhibit the same strict-subcategorization, occurring both in P-markers like (21) and in (30).

However, the prepositional element in this "modal" cannot be handled as were the prepositions following insistir and tender (see fn. 3), since there is no evidence that it is part of a PrepP. That is, where (40a,b), in which the NP of the PrepP has been pronominalized, are

grammatical, (40c) is not:

(40) a. tendió a eso
'he tended towards that'
b. insistió en ello
'he insisted on it'
c. *he de ello
*'I must it',

indicating that there is no NP to pronominalize (and thus no PrepP). Therefore, haber de will be entered in the lexicon as a single unit, in each of its two senses.

Soler and osar, considered by Feldman (1964:243) as possible modals, also fit well into the present analysis. The latter takes sentential complements like $deber_1$ and $poder_1$:

(41) Juan osa manejar sin placas
'John dares to drive without plates'

an instance of verb phrase complementation:

(42) $[_S$Juan$[_{VP}$osa$[_S$Juan maneja sin placas$]_S]_{VP}]_S$.

However, osar cannot occur in P-markers like (30), since it requires animate subjects ("things" do not "dare"), and so it, unlike poder and deber, has only one semantic interpretation.

The reverse situation is seen with soler, in

that it unambiguously refers to the habituality of some state or activity, and thus can occur only in P-markers like (30), taking sentential or abstract subjects:

(43) a. Pedro suele estar en casa a mediodía
'Peter is usually at home at noon'

b. la sequía suele traer mucha miseria
'droughts usually create great misery'

c. suele llover en septiembre
'it usually rains in September

showing the underlying structure

(44) a. $[[[\text{Pedro estar en casa a mediodía}]_S]_{NP}$ $[\text{soler}]_{VP}]_S$

b. $[[[\text{la sequía traer mucha miseria}]_S]_{NP}$ $[\text{soler}]_{VP}]_S$

c. $[[[\Delta \text{ llover en septiembre}]_S]_{NP}[\text{soler}]_{VP}]_S$.

It seems reasonable to suppose, until evidence to the contrary is presented, that other such "modals" are analyzable in the same terms, i.e., as main verbs with certain restrictions needed anyway for other verbs in the language. Thus, the Spanish grammar which treats modals as "simply verbs" is simpler and more general than the one which sets up a category [+M].

III.C. Other auxiliaries

The question arises, then, as to whether perhaps the other traditional "Auxiliaries," haber+do and estar+ndo, might be better handled as main verbs in underlying structures. Harris (1967:126) has pointed out that they take the full range of verbal inflections for person, number and aspect, and behave the same as verbs with respect to negation and interrogative formation (although, being "statives," they have no imperative), so that if they are not [+V], then a number of transformations will have to be complicated to the extent of specifically mentioning them (as well as $\left\{\begin{matrix}+\text{Verb}\\+\text{Copula}\end{matrix}\right\}$) in the appropriate term of their corresponding structural descriptions.

But desirable as it may seem to treat (abe+do) and (sta+ndo) as main verbs, the means of accomplishing this are far from clear. E.g., while an analysis like the one proposed here for some "modals," namely, that of verb phrase complementation (V+#S#), might be attempted for these other auxiliaries as well, it would fail to account for the impossibility of negating the complement sentence in such sentences as (45b):

(45) a. puedo cantar — cf. puedo no cantar

'I may sing' — 'I may not sing'

b. he cantado cf: *he no cantado

'I've sung' *'I've sung haven't'

Therefore, estar+ndo and haber+do will continue to be treated as auxiliaries in the present study.

The treatment of modals as main verbs in Spanish is demonstrated in the rules, lexicon and sample derivations of the following Appendix.

footnotes to section III:

1) For explication of these terms, see Chomsky (1965: 60-2).

2) This sentence might be held to be grammatical, in the sense of "he tended to make me criticize John," but even if such is allowed, (23b) in this sense is developed from a P-marker (such as (35)) quite different from (24), and therefore still must be blocked as a derivation from (24).

3) Verbs like tender and insistir are considered to be marked in the lexicon with a morphophonemic feature specifying that they are followed by a particular preposition.

4) That $poder_1$ takes [+Abst] subjects is illustrated by sentences such as la campaña contra el analfabetismo puede tener mucho éxito 'the campaign against illiteracy may be very successful', where campaña is [+Abst]. (Note that, although a sentence like Juan empezó 'John began' (where empezar is a verb which occurs in deep structures like $poder_1$ and parecer, taking abstract or sentential subjects) is grammatical, in spite of the fact that the subject is concrete and non-sentential, it is clearly an eliptical construction, whereas (e.g.) la función empezó 'the event got underway', with an abstract subject, is not.

5) The #S# dominating the "promoted" VP is assumed to be deleted by a convention which "prunes" S's which do not branch (see Ross (1966)), and the NP dominating the pruned #S# is also assumed to be deleted by convention.

APPENDIX

Some rules of the base component[1]:

B1) #S# → ⟨{Int / Imp}⟩ NP + PredP

B2) PredP → ⟨Neg⟩ Aux + VP

B3) VP → {VerbP / CopP}

B4) VerbP → V { ⟨NP⟩ / ⟨#S#⟩ / ⟨PrepP⟩ } ⟨por+Pass⟩

B5) CopP → Cop { NP / Adj }

B6) Aux → Asp ⟨abe$_2$+do⟩ ⟨sta$_2$+ndo⟩

B7) Asp → [±Perfv]

B8) [-Perfv] → [±Past] ⟨abe$_3$⟩[2]

B9) PrepP → Prep + NP

B10) NP → { ⟨Det⟩N⟨#S#⟩ / #S# }

B11) V → [+V], C.S.

B12) Cop → [+C], C.S.

B13) N → [+N, ±Pro, ±Comm, 1/2Nmbr,...], C.S.

B14) [+V] → C.S./[+N]..._____...[+N]

Lexicon[3]:

flore [+N, -Pro, 2Gndr,...]

yo [+N, +Pro, 1Nmbr, 1Pers,...]

tú [+N, +Pro, 1Nmbr, 2Pers,...]

se [+C, +[__NP],...]

sta_1 [+C, +[__Adj],...]

abe_1 [+V, +SubjDelet,...]

tende [+V, +[__[a+NP]$_{PrepP}$], -F_i,...]

insisti [+V, +[__[en+NP]$_{PrepP}$], +F_i,...]

compra [+V, +[__<Det>N<#S#>], +[[+Anim]__],...]

quere [+V, +[__<Det>N<#S#>], +[__[#S#]$_{NP}$], +[[+Anim]__],
-[__por+Pass], +F_i,...]

$pode_2$ [+V, +[__#S#], +[[+Anim]__], -F_i,...]

$debe_2$ [+V, +[__#S#], +[[+Anim]__], -F_i,...]

$abe\text{-}de_2$ [+V, +[__#S#], +[[+Anim]__], -F_i,...]

osa [+V, +[__#S#], +[[+Anim]__], -F_i,...]

parece [+V, +[[#S#]$_{NP}$__], +[[+Abst]__],...]

$pode_1$ [+V, +[[#S#]$_{NP}$__], +[[+Abst]__],...]

$debe_1$ [+V, +[[#S#]$_{NP}$__], +[[+Abst]__],...]

$abe\text{-}de_1$ [+V, +[[#S#]$_{NP}$__], +[[+Abst]__],...]

sole [+V, +[[#S#]$_{NP}$__], +[[+Abst]__],...]

Transformational rules:

T1) passive: X+NP+Aux + V + NP+por+Pass+Y

1 2 3 4 5 6 7 8 →

1 5 3 $\begin{bmatrix} +C \\ +_NP \end{bmatrix}$+d+4 Ø 6 2 8

T2) equi-NP_4 deletion: X+NP+Aux+$\begin{Bmatrix} V \\ C \end{Bmatrix}$+#+NP+$\begin{Bmatrix} V \\ C \\ abe_2 \\ sta_2 \end{Bmatrix}$+Asp+Y+#+Z

1 2 3 4 5 6 7 8 9 10 11 →

1 2 3 4 Ø Ø 7 r 9 Ø 11

condition: 2=6

T3) subject-incorporation$_5$: X + # +NP+PredP+#+PredP+Y

1 2 3 4 5 6 7 →

1 3+2 Ø 4 5 6 7

T4) VP-promotion$_6$: X+NP+#+$\begin{Bmatrix} V \\ C \\ abe_2 \\ sta_2 \end{Bmatrix}$+Asp+Y+#+Aux + V + Z

1 2 3 4 5 6 7 8 9 10 →

1 2 Ø Ø Ø Ø Ø 8 9+4+r+6 10

T5) que-insertion[7]:

(X+NP+Aux+V)+#	+				NP		+PredP+#+Z			
1	2	3	4	5	6		7		8	9 →
1	2	3	4	Ø	que+6		7		Ø	9

condition: if 1,2,3,4=Ø, then 6<#S#.

T6) affix-switching:

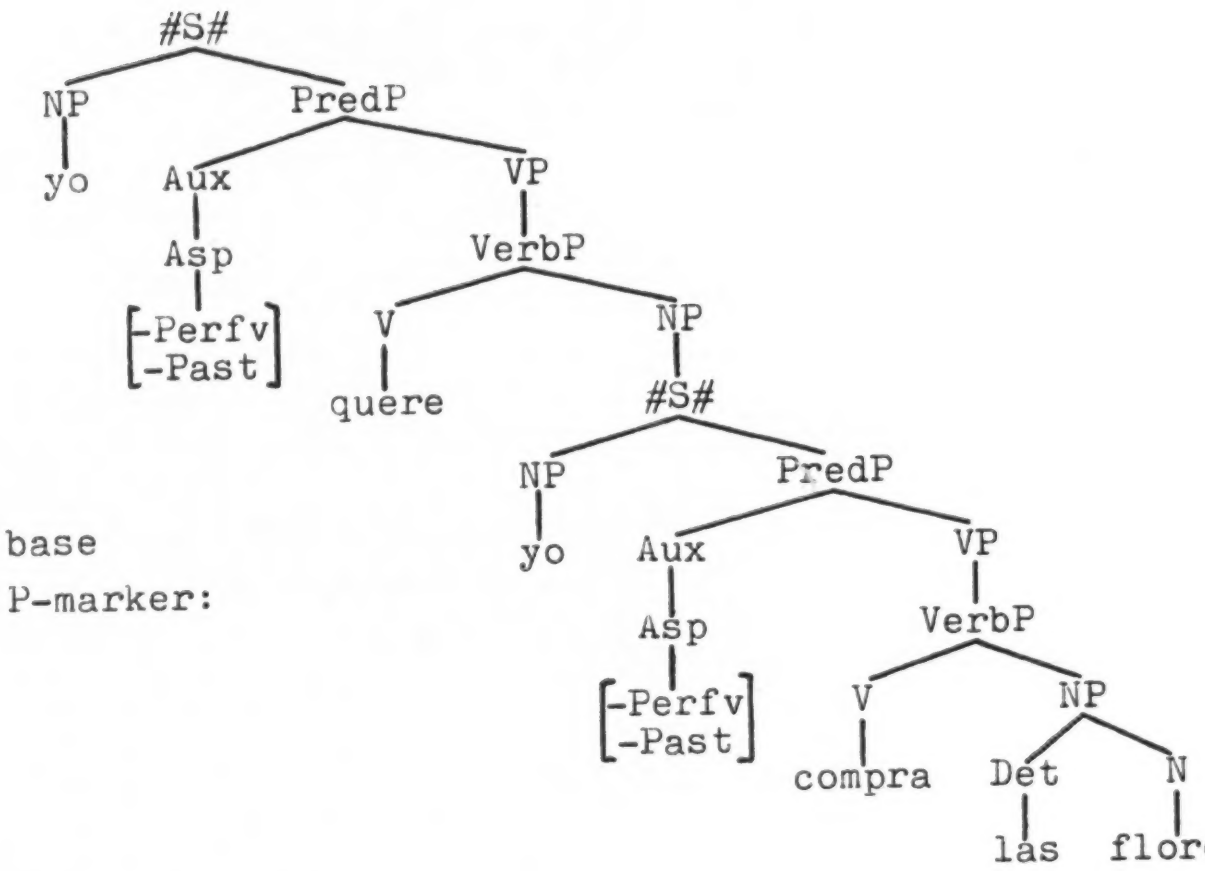
X	+	Af	+Stem+Y	
1		2	3	4 →
1		3+2	Ø	4

conditions: Af=do, ndo, d, r, Asp
Stem=V, C, sta_2, abe_2
4 ≠ Af

Exemplary derivations:

(a) quiero comprar las flores
'I want to buy the flowers'

base P-marker:



labelled bracketing (a simplified, linear representation of the P-marker):

#yo+[ ]^{8}+quere#yo+[ ]+compra+las+flores##

T6) compra+[ ]

T2) Ø Ø r Ø

T7) quere+[ ]

P9) yo quiero comprar las flores

(b) quiero que tú compres las flores
'I want you to buy the flowers'

base P-marker: same as that of (a), except that the subject NP of the embedded #S# is tú, not yo.

#yo+[ ]+quere# tú+[ ]+compra+las+flores##
T6) compra+[ ]
T5) Ø que Ø
T6) quere+[ ]
P) yo quiero que tú compres[10] las flores

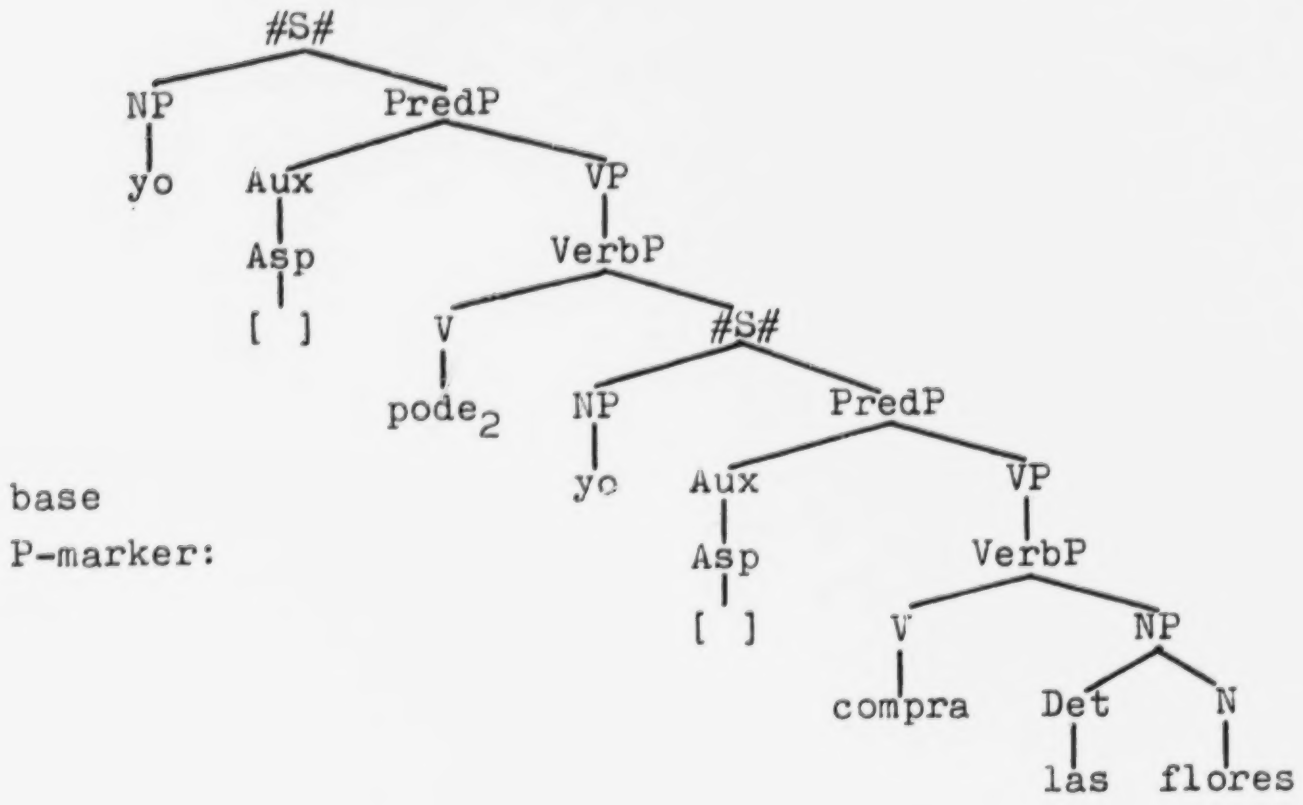
(c) quiero que las flores sean compradas por ti
'I want the flowers to be bought by you'

base P-marker: same as that of (b), except that por+Pass is chosen in the VerbP of the embedded #S#.

#yo+[ ]+quere# tú+[ ]+ compra+las+flores+por+Pass##
T1) las+floresØ se+d Ø Ø tú
T6) se+[ ]+compra+d
T5) Ø que
T6) quere+[ ]
P) yo quiero que las flores sean[10] compradas por ti

(d) <u>puedo$_2$ comprar las flores</u>
'I can buy the flowers'

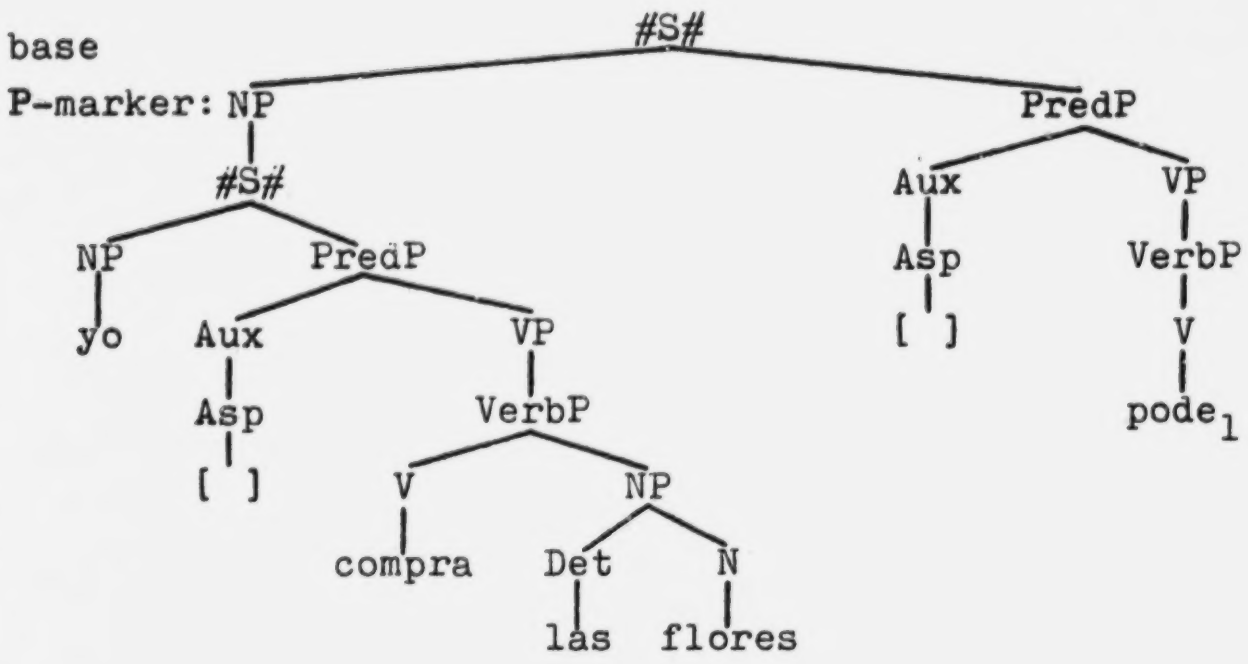
base P-marker:



#yo+[ ]+pode$_2$#yo+[ ]+compra+las+flores##

The remaining steps of the derivation are equivalent to those of (a).

(e) puedo$_1$ comprar las flores
'I may buy the flowers'



yo+[ ]+compra+las+flores#[ ]+pode$_1$

T6) compra+[ ]

T3) yo+# Ø

T4) Ø Ø Ø Ø Ø Ø [ ]+pode$_1$+compra+r+las+flores

T6) pode$_1$+[ ]

P) yo puedo comprar las flores

(f) que yo compre las flores es posible
'it's possible that I may buy the flowers'

base P-marker: same as that of (e)

yo+[ ]+compra+las+flores#[ ]+pode$_1$#

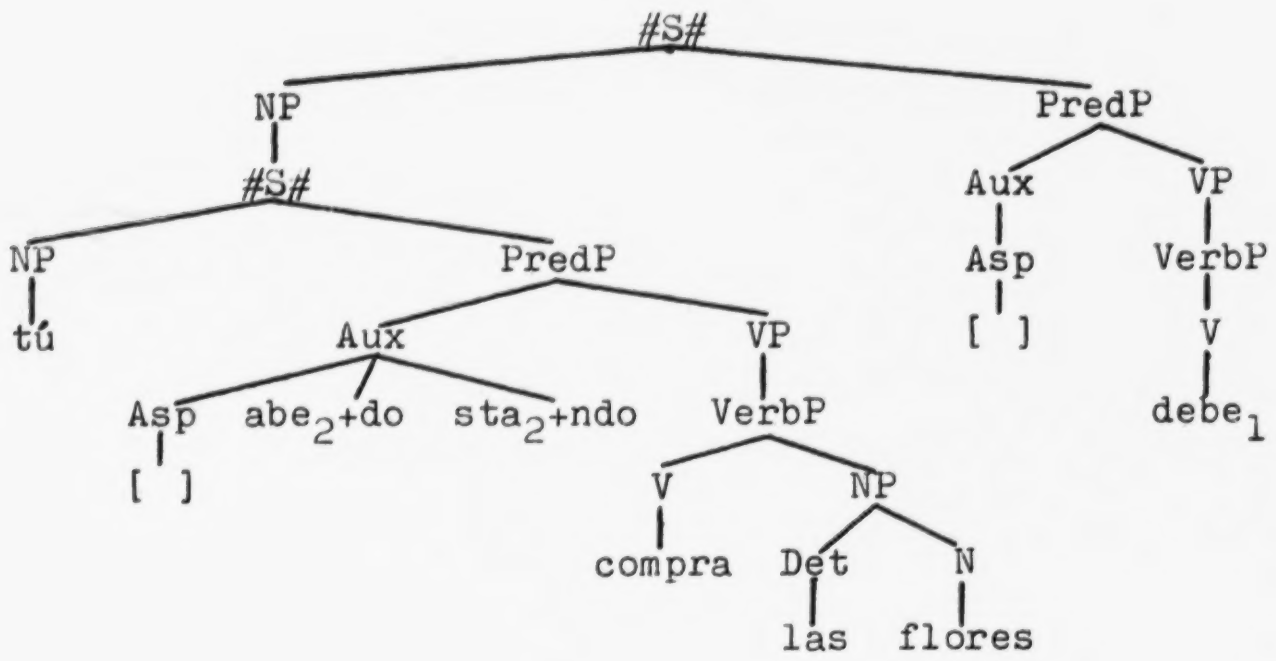
T6) compra+[ ]

T5) Ø que Ø

T6) pode+[ ]

P) que yo compre las flores es posible

(g) <u>debes$_1$ haber estado comprando las flores</u>
'you must have been buying flowers'



##tú+[ ]+abe$_2$+do+sta$_2$+ndo+compra+las+flores#[ ]+debe$_1$ #

T6) abe$_2$+[ ]+sta$_2$+do+compra+ndo

T3) tú#Ø

T4) ØØØØØØØØ [ ]+debe$_1$+abe$_2$+r+sta$_2$+do+compra+ndo+las+flores

T7) debe$_1$+[ ]

P) tú debes haber estado comprando las flores

footnotes to the Appendix:

1) These rules make no attempt at completeness, and many matters not crucial to the present topic (e.g., adverbials) are omitted.

2) Rules (B6,7,8) intend to treat tense and aspect as do Stockwell, Bowen and Martin (1965:147), though many details of this approach are not clear. (The subscript serves to distinguish this haber from $haber_1$ ([+V]) and $haber_2$ (auxiliary).)

3) Even though there is a convention which automatically specifies formatives for the negative value of all features for which they are not idiosyncratically positively specified, many negatively-valued features are redundantly included here for clarity.

4) Recoverability of Asp (8 in the structural description of (T2), also 5 in (T4), is presumably assured by its being the unmarked representative of the category.

5) The rule is oversimplified in this form: it must be expressed so as not to permit (e.g.) $[[$que Juan miente $]_S]_{NP}$es verdad 'that John lies is true' to be developed into *Juan es verdad... *'John is true...'.

6) This is similar to what Rosenbaum calls "it-replacement," but we have adopted the slight modification suggested by McCawley (1967:3), and adhere to his revised nomenclature.

7) The condition on (T5) is a (perhaps not wholly satisfactory) way of allowing it to account for both Derivation (b), quiero que tú compres las flores (1,2,3,4

footnotes to the Appendix (concluded):

≠Ø), and (f), <u>que yo compre las flores es posible</u> (1,2,3,4=Ø). (The symbol <u>A≤B</u> is to be read "A dominates B;" after Rosenbaum and Lochak (1966).)

8) Henceforth, these empty brackets are to be read $\begin{bmatrix}\text{-Perfv}\\ \text{-Past}\end{bmatrix}$; i.e., "present tense."

9) The symbol <u>P</u> subsumes all morphophonemic and phonological rules (subject-verb agreement, etc.).

10) We assume that <u>querer</u> is marked as "causing the subjunctive" and that the <u>P</u> rules appeal to this feature to change the mood of the <u>V</u> of the embedded #S# as shown.

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